

## CLAIMS:

1. DC/AC converter for supplying two gas discharge lamps, comprising:
  - a pair of input terminals for supplying a DC voltage;
  - a first series circuit interconnecting the input terminals, comprising a first switching element and a second switching element;
  - 5 - a second series circuit interconnecting the input terminals, comprising a third switching element and a fourth switching element;
  - a third series circuit interconnecting the input terminals, comprising a first capacitor and a second capacitor with substantially equal capacitance;
  - a first gas discharge lamp connected between the junction between the first
  - 10 and the second switch element and the junction between the two capacitors;
  - a second gas discharge lamp connected between the junction between the third and the fourth switch element and the junction between the two capacitors;
  - wherein an inductor is connected in series with each of the lamps; and
  - control circuit for controlling the first to fourth switch elements, and which is
  - 15 adapted to avoid the simultaneously conducting of the first and second switch elements, the third and the fourth switch elements respectively,
  - characterized in that the control element is adapted to control the conducting periods of the switches with a duty cycle which is variable.
- 20 2. DC/AC converter as claimed in claim 1, characterized in that the control unit is adapted to control the duty cycle of the first and second switch elements simultaneously and to control the duty cycle of the third and fourth switch elements simultaneously.
3. DC/AC converter as claimed in claim 1 or 2 , characterized in that the control
- 25 unit is adapted to control the switch elements with a frequency in the band between 140 Hz and 170 Hz.
4. DC/AC converter as claimed in claim 1, 2 or 3, characterized in that between the input terminal and the first switching element a series circuit of an inductance and a diode

is connected, wherein a fifth switching element is connected between the junction of the diode and the inductor and the second input terminal and the fifth switch element is controlled by the control circuit.

- 5 5. DC/AC converter as claimed in claim 4, characterized in that the frequency of the switching of the fifth switch element is at least an order of magnitude higher than the frequency of the first to fourth switching elements.